

REMARKS

The amended amounts of A) are supported in page 4, line 26, the amounts of B) are supported in page 5, line 1, the butadiene content of the graft is supported in page 5, line 6 and the amount of C) finds support in page 5, line 14.

The invention is directed to a molding composition that includes

- A) 50 to 80 parts by weight (pbw) of polycarbonate and/or polyester carbonate having M_w of 25,000 to 35,000 ,
- B) 7 to 30 pbw of a mass polymerization-derived ABS having butadiene content of 11 to 14% and characterized in that the molecular weight of its grafted copolymer is 50,000 to 140,000,
- C) 2 to 18 pbw of a halogen-free phosphorus compound, and optionally
- D) fluorinated polyolefin,
- E) acrylic polymer and
- F) inorganic material of defined particle size.

The mechanical and physical properties of the composition were found to be critically dependent on the butadiene content molecular weight of the included ABS. Attention is directed to the properties tabulated in page 30 of the application where a direct comparison is enabled between Example "A" (a comparative example and Example 1 that except for the difference in their included ABS are identical one to the other. The resistance to creep, stress cracking resistance and impact strength of the inventive composition are greater and its melt viscosity is lower than the comparative example, all surprisingly and unexpectedly dependent on the difference in the ABS component.

Claims 1-18, 20 and 21 stand rejected under 35 U.S.C.102 (b or e) as anticipated by

U.S. Patent 6,117,542 (Nanba),

U.S. Patent 6,335,767 (Tagaki) – For the record, the Tagaki reference has been misidentified in the Action; the correct patent number is 6,355,767-,

U.S. Patent 6,403,683 (Kobayashi),

U.S. Patent 6,503,628 (Janarthanan),
U.S. Patent 6,596,812 (Toyoshima), or
U.S. Patent 6,613,824 (Campbell).

Nanba disclosed a flame retardant resin composition that contains a thermoplastic resin, flame retardant and a fluororesin. The referenced polycarbonate and ABS that are disclosed in Claim 4, the fluororesin disclosed in Claim 1, and the oligomeric phosphate flame retardant disclosed in Claim 8 do not describe the claimed invention with the degree of specificity required of an anticipating document. Nor can the exemplified compositions be taken as anticipating: the molecular weight of the relevant polycarbonate, (A1) is, in accordance with column 29, line 21, 22,500, and the butadiene content of the relevant ABS is either 10 or 33% butadiene, neither describing the ABS as presently claimed.

The rejection under section 102 over Nanba is believed addressed and overcome by the present amendment.

Tagaki disclosed a composition that contains polycarbonate and a graft copolymer. Optional components of the composition include phosphorous compounds. Contrary to the presently required mass-polymerization –produced ABS, the graft copolymer entailed in Tagaki’s composition is the product of

“any method such as bulk polymerization, suspension polymerization or emulsion polymerization”
(column 9, line 54).

Further, contrary to the presently claimed halogen-free phosphorous compound, the Tagaki’s optional flame retardant includes halogenated compounds (column 12, line 37).

Tagaki’s exemplified compositions do not describe the present invention at least because the butadiene content of the included ABS is outside the presently claimed range (see column 17, line 59 and column 18, lines 18, 35 and 50). Lacking the specificity required by the statute Tagaki falls short of anticipating the claims.

Kobayashi disclosed a polycarbonate composition that contains a styrene based resin, a phosphate based flame retardant and silicate filler. Notably, the referenced styrene-based resin includes ABS that unlike the presently required mass-polymerized ABS, may be produced by any polymerization method – column 6, lines 42 et seq. Further unlike the present ABS that is required to contain but 11-14% butadiene, Kobayashi's ABS may contain butadiene in an amount of 5 to 75% relative to the weight of the ABS (column 6, line 26).

Kobayashi's exemplified compositions do not describe the present invention at least because the butadiene content of the included ABS is 20%.

Lacking the specificity required by the statute Kobayashi falls short of anticipating the claims.

Janarthanan disclosed a composition containing polycarbonate having a weight average molecular weight in the broad range of 10,000 to 200,000, and a relevant "second" graft polymer, such as ABS having butadiene content of 10 to 16 wt %, prepared by any of the known polymerization methods (column 7, lines 50 et seq.) Optional flame retardants are noted to have been disclosed.

It will be noted that none of the working examples include the presently required halogen-free phosphorous compound.

Lacking the required specificity Janarthanan falls short of anticipating the claims.

Toyoshima disclosed a composition containing polycarbonate and a rubber-reinforced resin that embraces ABS. Contrary to the required mass-polymerization-produced ABS of the present invention, the rubber-reinforced resin of Toyoshima is prepared by any of a variety of polymerization methods - column 5, lines 52 et seq. The content of the rubber-like polymer in the rubber reinforced resin is 10 to 70% (column 2, line 26). Nothing is disclosed in the reference relative to the presently required halogen-free phosphorous compound.

Toyoshima cannot reasonably be said to anticipate the present claims.

Campbell disclosed a flame retardant composition containing polycarbonate that includes a rubber modified graft copolymer and a phosphorous species. The rubber content in the graft is in the range of 2-70% relative to its weight (column 8, lines 42 et seq.). The working examples do not describe the claimed invention at least because their higher contents of polycarbonate.

Campbell cannot reasonably be said to anticipate the present claims. Applicants confirm the Examiner's presumption relative to the ownership of the inventive subject matter.

Claims 1-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,117,542 (Nanba), U.S. Patent 6,335,767 (Tagaki), U.S. Patent 6,403,683 (Kobayashi), U.S. Patent 6,503,628 (Janarthanan), U.S. Patent 6,596,812 (Toyoshima), or U.S. Patent 6,613,824 (Campbell) in view of U.S. Patent 5,849,827 (Bodiger).


The primary references have been discussed above and the shortcomings of each in the present context have been noted.

Bodiger disclosed a composition that contains polycarbonate, optional graft polymers of vinyl polymers on a rubber (A.2) – column 4, lines 18 et seq. and flame retardant and a finely divided inorganic powder. The rubber content of the graft polymer is 5 from 95 parts by weight.

Bodiger is not seen to in any way modify any of the primary references in a manner describing the claimed invention and the rejection alleging obviousness thereover is clearly untenable.

Believing the above represent a complete response to the Office Action and that the application is in condition for allowance, Applicants request the earliest issuance of an indication to this effect.

Respectfully submitted,

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